



## Overview of Materials in the Traveling Tech Lab

### **Wearable and E-Health Technology:**

- Withings Blood Pressure Cuff—Bluetooth blood pressure monitor. Paired through Bluetooth, documented in the Withings app. After downloading the app and pairing the cuff via Bluetooth, it will pump and read your blood pressure for you.
- Jawbone UP24—bracelet that tracks your steps and sleep (deep vs. light sleep), using the UP app, which is a beautiful app!
- Moto 360—First highly anticipated watch because it is round and looks less like tech and more like a watch. Uses Android Wear and Google Now. You can get your phone's notifications, email, direction navigation, alarms, step activity, heart rate and more.
- Samsung Gear Live—Same as the Moto 360, but of the first officially released smart watches with Android Wear, Android's operating system for all of their wearable tech.
- AliveCor—A mobile ECG monitor! Using your smartphone, and app and the small device, you can gain insight into your heart's activities!
- Ozmo Smart Cup—Make sure you get your required amount of liquids with this smart cup. It knows how much water and caffeine and water you are drinking
- Grush—Smart toothbrush for kids! Kill monsters in an app by brushing your teeth correctly

### **Streaming devices:**

- Apple TV—can watch some movies, Netflix, YouTube, Hulu Plus, and more, and mirror (display your phone's screen on the big screen) your iPad or iPhone
- Roku—can watch some movies, Netflix, YouTube, Hulu Plus and more. It has the widest free and paid channels available, with hundreds to choose from. Not made for mirroring your devices.
- Chromecast—can only mirror or display your device's screen onto your TV, using the Chrome browser extension. It is meant to be able to project what your device is doing on to your TV. It is not a standalone device like the above devices, but it is cheap and allows you to watch anything you can see on your device, but on the big screen

### **Augmented Reality:**

**Augmented reality (AR) is simply layering digital information on top of real information. Seeing the "1<sup>st</sup> Down" lines on a TV football game is an example of AR. It's not there in reality, but that digital information is layered on top of it. AR is used for many things, from information to fun activities.**

- Quiver (formerly Colar Mix )App—Download free coloring pages (colarapp.com) and see them come to life. To see all coloring pages, you must download the paid app at 2.99.
- Aurasma—free app that allows you to see money (try and scan your \$20 bill!) or advertisement come to life and allows you to create your own augmented reality
- Popar 3D—allows you the ability to see all their products, but you must download the app that is specific to the book, poster or puzzle
  - Dinosaurs 3D
  - Safari 3D
  - Planets 3D
  - Planets Puzzle
  - Construction Puzzle
  - Solar Chart
  - Human Anatomy Chart
  - Periodic Elements Chart
  - Sea Life 3D
  - Wonders of the World 3D Map
- GWR2014 and 2015—allows you to view the Guinness Book in 3D
- Crayola Color Alive—A coloring book from Crayola that brings your coloring to life! Use special crayons or your own crayons. Currently three separate themes.
- 4D Elements App—Allows you to see the 4D blocks come to life and interact. You need the 4D blocks to view this
- Anatomy 4D App—You can print out the sheet on the Daqri page and see the heart and the body come to life
- Oboto—place a robot freely in your environment and watch him come to life (iOS App Store only)
- Yelp—Using Monocle, you can see in AR, the businesses and restaurants around you and their possible reviews
- Ikea—Using their catalog, you can view the items in your home with AR before you even buy them.

### **Home/Office Automation:**

- SmartThings—Home automation, funded successfully by Kickstarter. They are wireless sensors and outlets that send information to their app (via the hub). It can tell you if a door or window opens up (using the multisensory), if a light is on (using their outlet) or if there is motion or activity (using a motion sensor).
- TCP Lighting—Home automation lighting system, dimmable from 0 to 60 watts, but emits only 8 watts, saving energy, and lasts 22.8 years on average. This also uses a hub that allows the lights to speak to you through their TCP app
- Tile/Chipolo Bluetooth trackers-paired with your phone, the little device is made to detect if the object it is attached to goes out of range with your phone. It will create a beep if it goes out of range, and allows you to find it within a certain range

- Dropcam/Nest—Cloud security camera with infrared, two-way talk and motion detection. 1080p camera with 137-degree range, it has 8x zoom and night vision, you hook it up via your WiFi and can then view your camera's feed anywhere in your account through the Nest app
- NFC (Near Field Communication) Tags—small adhesive strips with little passive chips in them. You can program them to perform small tasks for any NFC enabled phone that taps it. Using a free NFC program app, you decide what task you want to program on the chip (turn my phone on vibrate when I tap the tag, go to this website when I tap the tag, open this app when I tap the tag). Once it is programmed (you send the command program to it by tapping it as well), then whenever you tap that tag, it will perform that command.

### **Makerspaces:**

- 3Doodler—3-D Printing Pen, heating plastic sticks similar to a glue gun, you can doodle not just on flat surfaces, but also vertically
- CreoPop—3D printing pen that uses gel instead of plastic. It is cool to the touch and wireless!
- Google Cardboard—Ride a roller coaster, visit Tuscany, go sky diving and more! Use your smart phone to bring virtual reality to life, for a fraction of the price using Google's Cardboard headset
- ViewMaster VR—Viewmaster uses your smartphone and their traditional discs to view virtual reality and take your child on a destination, from wildlife to space!
- Snap Circuits—Light version: Similar to Legos, but teaches children and adults about electricity. 182 possible projects for Snap Circuits Lights.
- Lego Fusion—When used with an app, you can build buildings in real life, then scan the buildings in a free app to be able to play an interactive game
- Pixel Press Floors—Using a free app, their free downloaded grid paper, and the instructions, children can create their own, live video game using just paper, pencil and an app. [Projectpixelpress.com](http://Projectpixelpress.com)
- Osmo—Using their app and simple tools like a reflector and base for your iPad, Osmo allows the child to play the online game in real life! Using the reflector and their associated game materials (like letters), Osmo can read the real game pieces on the table and easily assimilates them onto the app game itself. This allows the child to play an online game with real material, and encourages collaboration with others. [Playosmo.com](http://Playosmo.com)
- Raspberry Pi—Small and inexpensive computer made for teaching coding skills. It looks like a simple circuit, but if you plug it into an HDTV monitor, plug in a keyboard and mouse into the attached USB ports, and have an SD card, you can download and use the Python OS to do just about anything! Go to [raspberrypi.org](http://raspberrypi.org) for more information.
- Ozobot—Small robot that can use markers for coding! Turn the robot around, speed it up or slow it down, all through simple code using fat markers. All you need is a white drawing area, red, black, green and blue markers, and the Ozobot.

- Dash—This robot drives around like the Sphero ball (see below), and just like the Sphero Ball, you can teach children code as well! Download Dash apps to teach code. This is especially made for younger aspiring coders
- MiPoSaur—This dinosaur has a mind of its own, or does it? Control MiPosaur with gestures, with its ball or through an app. He will do a variety of things based on his mood and color. Discover what your gestures and commands can do!
- Lego WeDo 2.0—Make your creation, code your creation! Lego offers a set to create helicopters, rovers, cars and more. Once you create what you want, learn to code it through an app or computer software. Simply connect the Bluetooth piece to your creation and then through your device and you can command and program as you wish!
- Sphero Ball (SPRK Edition)—Robotic ball driven by the downloaded app and your device's Bluetooth for fun or teaching coding and math skills. Apps include:
  - Sphero
  - Sphero Golf
  - Sharky (Beaver catching coins)
  - Sphero Pet
  - Draw&Drive
  - Chromo
  - Rolling Dead
  - MacroLab

### **Other Emerging Tech:**

- Drones—Not just for military, but drones have many uses now, including taking hard-to-reach video and becoming a convenient delivery system (Amazon is hoping to launch [pun intended] their Drone program, flying products to Prime users soon). This one won't be carrying heavy books anytime soon, but it is equipped with an HD camera (SD card needed), and can fly to over 100ft using the associated controller. It is not easy to fly, though, and takes great practice. Be careful, the blades, though seemingly cheap, can do some damage when flying at high speed so fly with an experienced flyer!
  - Holy Stone HS170
  - Syma X11 with propeller protection
  - Hubsan X4 H107C
  - Cheerson CX-10 mini-drone
- Leap Motion—Gesture controller for your PC. You can use your hands to control and play games.